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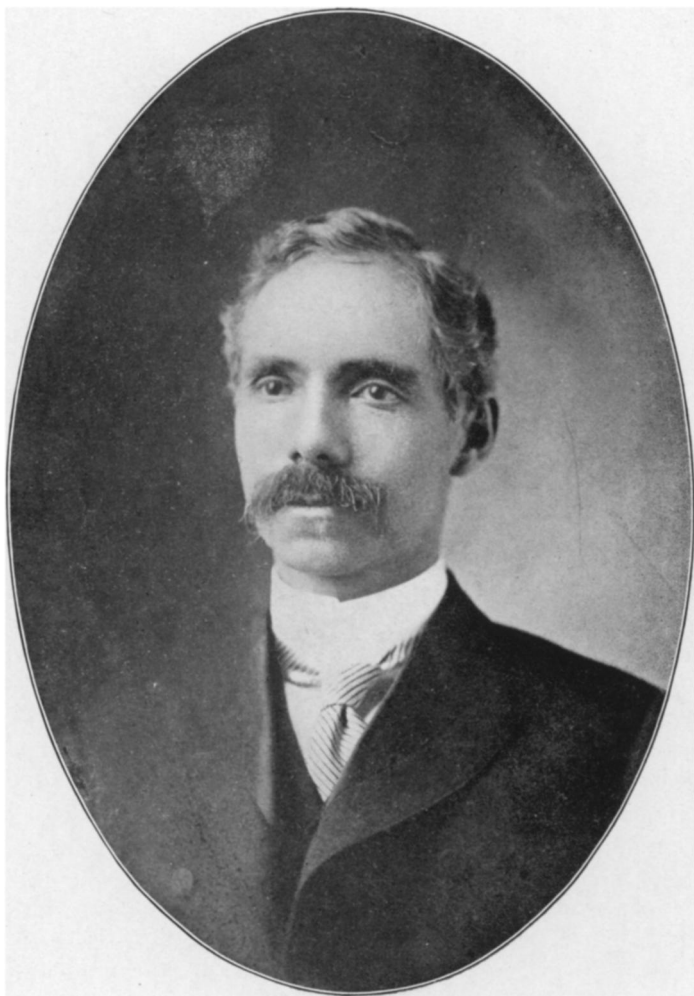
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*Yours truly,  
Wells W. Cooke.*

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IN MEMORIAM: WELLS WOODBRIDGE COOKE.<sup>1</sup>

Born Jan. 25, 1858 — Died March 30, 1916.

BY T. S. PALMER.

*Plate II.*

MEMBERS of the American Ornithologists' Union who are interested in migration are familiar with the contributions which Middendorff of Russia, Palmén of Finland, Gätke of Heligoland, Harvie Brown of Scotland, and other European ornithologists have made to that puzzling branch of ornithology which deals with the seasonal movements of birds. And they will not hesitate to include among the workers of the first rank in this field one of their own number who year after year labored patiently, persistently, and enthusiastically to raise the veil of mystery enveloping the habits of some of our common birds. In considering migration says Prof. Alfred Newton we "indeed are brought face to face with perhaps the greatest mystery which the whole animal kingdom presents. . . . The flow and ebb of the feathered tide has been sung by poets and discussed by philosophers, has given rise to proverbs and entered into popular superstitions, and yet we must say of it still that our 'ignorance is immense!'"<sup>2</sup> America's contri-

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<sup>1</sup> Address delivered at the thirty-fourth Stated Meeting of the American Ornithologists' Union, Philadelphia, Pa., Nov. 14, 1916. The accompanying plate is from a photograph taken in November, 1904.

<sup>2</sup> Dictionary of Birds, pp. 549-550, 1896.

butions to the literature of this fascinating subject will compare favorably with those of any other country and the work of Prof. Wells W. Cooke, her foremost student of bird migration, has already received recognition at home and abroad. Although it was not his privilege to journey to distant lands to observe birds, or to spend a half century watching migration at an ornithological observatory like Heligoland, nevertheless he was reared in the midst of the greatest avian highway of the continent and at an early age was attracted by the movements of the winged hosts passing north and south in spring and autumn. He not only improved his opportunities but succeeded in coördinating the efforts of others in collecting data and thus was able to make substantial additions to the sum of knowledge in his special field of investigation.

Wells Woodbridge Cooke, son of Rev. Elisha Woodbridge Cook and Martha Miranda (Smith) Cook, was born in Haydenville near Northampton, Mass., on January 25, 1858.<sup>1</sup> Cooke's father was a Congregational minister who had been brought up by his uncle, Wells Woodbridge, and after whom he named his son. The family included nine children — six girls and three boys; Wells, the fifth child and eldest son, received from his parents a heritage of patience, persistence and quiet force that contributed much to his success in later years. At an early age he was taken to Townsend, northeast of Fitchburg, Mass., and later to Hopkinton, N. H., where the family lived two years. About 1864 when he was six years old he accompanied his parents to Ripon, Wis., where his father had been appointed pastor of the church. Here in the lake region of eastern Wisconsin, Wells' boyhood was spent and here he received most of his education. He early exhibited an interest in natural history and when about twelve years of age he was given his first gun. He at once began to collect the common birds of the neighborhood and made frequent trips to Green Lake a few miles from Ripon in search of specimens. At first he merely mounted the heads and wings on boards and it was some time before he learned to prepare specimens

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<sup>1</sup> The year 1858 is an important one in the history of ornithology. It marks the close of the first century of systematic work, which began with the publication of Linnæus' *Systema Naturæ* in 1758, and the dawn of a new era in American ornithology signaled by the appearance of Baird's great work on North American birds.

according to approved methods. It would be interesting to know what were the influences during these years which moulded his future, what books or what companions directed his thoughts and aroused his enthusiasm in birds rather than in some other line of study. But apparently he has left no record on this point and his reticence regarding personal matters was such that he seldom mentioned his early ornithological studies even to his most intimate friends.

After completing the course in the preparatory schools he entered Ripon College and later studied at the University of Iowa in 1876, but having been taken ill in the following winter was compelled to return home. He again entered Ripon College and in due time graduated in the class of '79 with the degree of A. B., and in 1882 received the degree of A. M. On November 27, 1879, he married Miss Carrie Amy Raymond, daughter of Eusebe L. Raymond and Emily Lucina (Lucia) Raymond, a young lady who had been born and brought up in Ripon and whom he had known for some years.

Immediately after graduation he secured an appointment as a teacher in the Indian schools and was assigned to duty in north-western Minnesota. The next six years were spent in teaching, partly in the Indian Service, chiefly among the Chippewas, Choctaws, and Otoes, and partly in secondary schools, at half a dozen different places in four different States. His first school was on the White Earth Indian Reservation, Minn., just west of Lake Itasca, where he was noting the arrival of birds in the spring of 1881.<sup>1</sup> Here he spent three years although probably not all at one time as he was in Iowa late in 1881. The ornithological results of his residence on the Reservation were embodied in a paper on 'Bird Nomenclature of the Chippewa Indians.'<sup>2</sup> In the early part of 1882 he was back in Minnesota but the latter part of that year and the spring of 1883 were spent in Jefferson, Wis. Late in the summer he went to the Indian Territory (now Oklahoma) and taught in the Indian school at Caddo in the Choctaw Nation. Here he remained from August 27, 1883, to April 8, 1884, and his observations on birds were summarized in a recent paper on the winter birds of Oklahoma.<sup>3</sup> From Caddo he went to Red Rock among the Otoes

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<sup>1</sup> Bull. Nuttall Orn. Club, VI, p. 186, 1881.

<sup>2</sup> Auk, I, pp. 242-250, 1884.

<sup>3</sup> Auk, XXXI, pp. 473-493, 1914.

in the northern part of the Territory but was there only a few months when he was stricken with typho-malaria and was obliged to abandon his work. He returned north and staid at Moorhead, Minn., opposite Fargo, N. Dak., while he was recovering from the attack of fever. Here he continued teaching until the following summer when he left for Vermont to enter upon his college work.

The years thus spent in teaching in the Mississippi Valley are important not only because they afforded an opportunity for field work among the birds of widely separated localities but because they mark the beginning of coöperative observations on migration in the United States and the publication of the most detailed annual records of migration for a wide area that have ever appeared. The earlier reports which appeared in 1882 and 1883 brought the author into correspondence with observers in the middle west and gained for him substantial recognition by the American Ornithologists' Union which at its first meeting appointed a committee to coöperate with him <sup>1</sup> and in 1884 elected him an active member of the Union.

How or where Cooke first conceived the idea of coöperative observations on the movements of birds is not mentioned in any of his reports, but it is important to recall that similar work had been undertaken in Europe a few years before. In Germany observations were begun by Blasius, Reichenow and Schalow about 1876,<sup>2</sup> and in Scotland Harvie Brown and Cordeaux collected reports on the autumn migration of 1879 from light houses on the coasts of England and Scotland.<sup>3</sup> In both the German and English reports the observations begin in the autumn and continue through the winter and spring as do those of Cooke's first reports. In a review of the English report Dr. J. A. Allen suggested as early as 1880 <sup>3</sup> that it would be desirable and not impracticable to establish an ornithological bureau to which observations could be sent and elaborated, and that nowhere were conditions more favorable for systematic work than in the United States. This suggestion was made five years before the plan became an accomplished fact in the organization of the work now carried on by the Biological Sur-

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<sup>1</sup> Bull. Nuttall Orn. Club, VIII, pp. 225, 230, 1883.

<sup>2</sup> Zur Vogelkunde Deutschlands, I Jahresbericht (1876) des Ausschusses für Beobachtungs-Stationen der Vögel Deutschlands, J. f. O., 1877, pp. 278-342.

<sup>3</sup> Bull. Nuttall Orn. Club, V, pp. 175-177, 1880; see also Ibid., VIII, pp. 228-231, 1883.

vey. Evidently the dawn of a new era in the study of migration in America was close at hand.

In the winter of 1881-82 Cooke invited the ornithologists of Iowa to send him lists of winter residents and dates of the first arrival of spring migrants. The field of investigation was soon extended to include the whole Mississippi Valley. The reports for 1882 were published in 'Forest and Stream' for October to December, 1882; those for 1883 in the 'Ornithologist and Oölogist' for that year, and those for 1884 and 1885 in the bulletin on 'Bird Migration in the Mississippi Valley' issued by the U. S. Department of Agriculture.

In the autumn of 1885 Professor Cooke entered on a period of college work which lasted 16 years, during which time he was connected with three institutions, the University of Vermont, the State Agricultural College of Colorado, and the State College of Pennsylvania. He went to Burlington, Vt., as a graduate student of chemistry, apparently attracted partly by the presence on the faculty of Prof. A. H. Sabin, under whom he had studied chemistry at Ripon College. In January, 1886, he was employed as a lecturer in the Agricultural College and as State Chemist, and a few months later was appointed Professor of Agriculture in the University. Upon the organization of the Experiment Station early in 1887 he was made Director, a position which he held until September 1, 1893. He was evidently fully occupied with the many details of organization and administration connected with Station work. Of the 39 bulletins published during this time he was the author in whole or in part of 24, on such varied subjects as fertilizers, feeding experiments, insecticides, maple sugar, and testing dairy cows. In addition he prepared the annual reports and a number of short articles or notes on agricultural topics. From an ornithological standpoint the eight busy years at Burlington were the least productive of his life. Beside putting the finishing touches on his migration report he published only one short note in 'The Auk.' In later years he remarked that while he had added one bird to the Vermont list during his residence in the State he had never published the fact, whereas he published several additions to the Colorado list during his stay in that State although none of the additions were based on his own observations.

From Burlington, Cooke went directly to Fort Collins, Colo., where in the autumn of 1893 he took up the duties of Agriculturist at the State Experiment Station. He remained in this position for seven years busy with the varied duties connected with teaching agriculture and attending farmers institutes, but not unmindful of the birds. His experiment station work dealt with problems of forage crops, stock feeding, sugar beets, and dairying. Of the 13 bulletins which bear his name he was sole author of 9 and co-author of 4; four of these publications relate to stock feeding and three each to sugar beets, miscellaneous farm notes, and birds. Conditions at Fort Collins were evidently much more favorable for bird study than at Burlington and the incentive of a new fauna, diversity due to influence of altitude on bird life, and the opportunity for observation during his thousands of miles of travel every year in the course of his station work bore rich fruit later in his 'Birds of Colorado.' A few months after his arrival his first paper appeared and during his residence in the State he published 10 articles on birds in addition to three bulletins on the 'Birds of Colorado.' Two incidents of his Colorado experience also merit mention — a visit to Salt Lake City the most western point he ever reached and a severe attack of typhoid fever in October, 1895, from which he did not fully recover for nearly a year.

At the beginning of the autumn term of 1900 Professor Cooke became connected with the Pennsylvania State College in the capacity of volunteer associate engaged in research work in animal nutrition. The results of this work appeared in a paper on 'The Maintenance Ration of Sheep.' This report was finished in the spring of 1901 and is interesting as the first publication signed 'Wells W. Cooke.' All his previous papers appeared under the name 'W. W. Cooke,' and the change he afterwards explained was made at the beginning of the new century and was consistently maintained, except in his migration papers in 'Bird-Lore.' Thus, even without dates, it is easy to distinguish his 19th century from his 20th century contributions.

On July 1, 1901, Professor Cooke received an appointment in the Biological Survey in the U. S. Department of Agriculture and the remaining 15 years of his life were devoted to work on bird migration and distribution. As Dr. Chapman has well said,



never were man and opportunity better mated,<sup>1</sup> and he entered upon his work with characteristic energy and enthusiasm. His first position, was that of Expert Assistant, but on July 1, 1902, he was made Assistant Biologist, on July 1, 1908, Bird Migration Expert, and on November 1, 1912, Assistant Biologist, with bird migration and distribution as his chief work in all these positions. He undertook an exhaustive examination of the literature of migration and began a bibliography of the subject, but finding it difficult to differentiate between migration and distribution he devoted his attention to both subjects. He introduced the plan of entering each migration record on a separate card and wrote many thousands of cards with his own hand. This monotonous routine labor brought on writer's cramp and although he trained himself to write with his left hand this hand also suffered in the same way and in his later years he could not write more than ten or fifteen minutes without changing from one hand to the other. In 1915 he had the satisfaction of reporting that the number of cards in the migration index had passed the million mark. He naturally took a deep interest in the enactment of the Federal Migratory Bird Law, attended the hearing on the bill before the House Committee on Agriculture, and later as a member of the Biological Survey Committee took an active part in framing the regulations for carrying the law into effect. Outside the office his activities were manifested in various directions. He was an active member of the Biological Society of Washington, and served as treasurer from January 1, 1914, until his death. He also took a very active part in the work of the Audubon Society of the District of Columbia, serving on its executive committee, as one of the teachers in the bird classes, and as the principal leader on the spring outings organized to study birds in the field. He aroused much enthusiasm in the members in making migration notes, and collected material for two comprehensive papers on the migration of local birds.

Of Cooke the man it is unnecessary to speak except for the benefit of those who never had the pleasure of meeting him. In stature he was somewhat below medium height and rather slight. Although somewhat frail in appearance, at least in his later years,

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<sup>1</sup> Bird-Lore, XVIII, p. 189, June, 1916.

he was very active, fond of outdoor exercise and could walk farther and with less fatigue than many a man more robust and apparently more athletic. In manner he was quiet, somewhat serious, but always genial and willing to assist his friends or acquaintances. He was wonderfully patient not only in imparting information but in accepting petty annoyances. In certain respects he had a keen sense of humor and did not hesitate to recount incidents which must have been anything but amusing to him at the time. A situation created by the editorial blue pencil which made him say something very different from what he intended, or which consigned his manuscript to cold storage for a year or two, a mishap on an outing resulting in an accident in a boat at night, or his efforts to hold the attention of an audience in a carefully prepared lecture when the boys in the front row were chiefly interested in projecting their silhouettes on the screen, were all described for the benefit of his friends as freely as any other information at his disposal. He had a large and constantly increasing circle of friends. A new face in the office, whether of messenger, clerk or field assistant, always aroused his interest and he usually made a point of becoming acquainted with the new comer at the first opportunity. He was also interested in the personal history of his friends, and would make special inquiries to satisfy his curiosity, but it was done so quietly that hardly anyone would suspect that he had more than a casual interest in the individual. For such details his memory was remarkable. He was fond of classical music and enjoyed a good concert or opera almost as much as he did tramping in the woods. He always found congenial spirits among those who were fond of being outdoors whether in tramping, botanizing or observing the birds. Much of his spare time was spent in the country summer and winter, exploring the vicinity of Washington in search of birds, ferns, or new walks. Few residents of the capital knew the surrounding country better than he and he took a prominent part in organizing the spring outings of the Audubon Society, the walks of the College Women, and occasionally in acting as leader on the outings of 'The Wanderlusters,' an active walking club of the city. It was his custom to spend several afternoons and evenings each week at 'The Wickiup,' at Viresco, on the Virginia side of the Potomac, a few miles above Washington. Here on a three-

acre tract of land belonging to his sister, a commodious one room cabin was built with a cheerful open fire place and a comfortable porch, where with his sister and daughter he entertained informally but with unusual hospitality several hundred of their friends a few at a time in congenial groups. Here he brought together a collection of living ferns of the District practically complete so far as local species were concerned, and here and on an adjoining farm he made his first bird census in 1911. The Wickiup will long be remembered not only by those who have seen it, but also because of its association with certain phases of his ornithological work. In 'Bird House Tenants'<sup>1</sup> he has described his failure to induce Purple Martins to take up their abode in the house erected for their special benefit, and in the bird census reports<sup>2</sup> he refers to his first experiments at this place where the ideas were gained which later were embodied in the instructions sent to observers who coöperated in the first general census.

Cooke was an indefatigable worker and his interests extended into several distinct fields. The list of his ornithological contributions prepared by himself includes about 200 titles, but no list is available of his many publications on the branches of agriculture to which he devoted attention. It is impossible at this time to give a bibliography of his publications on birds or to attempt more than a brief reference to some of the more important papers. His first article appeared in 1881,<sup>3</sup> and his last in 1916,<sup>4</sup> within a day or two of his death. During the 35 years of active work his chief contributions were made to the subjects of distribution, bibliography, and migration.

In distribution his most important contributions are Part 2 of the bulletin on 'Bird Migration in the Mississippi Valley' and his 'Birds of Colorado' with three supplements,<sup>5</sup> bringing the informa-

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<sup>1</sup> Bird-Lore, XV, p. 112, 1913.

<sup>2</sup> U. S. Dept. Agr., Bull. No. 187, pp. 2-4, 1915; Bull. No. 396, pp. 15, 17, 1916.

<sup>3</sup> Bull. Nuttall Orn. Club, VI, p. 186 (A brief note on the Least Bittern in Minnesota).

<sup>4</sup> 'Labrador Bird-Notes,' Auk, XXXIII, pp. 162-167, and a note on 'The Type Locality of *Uria l. troile*,' Ibid. p. 196. Mar. 31, 1916; 'Migration of North American Birds' (Titmice), Bird-Lore, XVIII, p. 97, Apr. 1, 1916. Two posthumous publications appeared later in the year—a note in 'The Auk' in July and his second bird census report in October.

<sup>5</sup> Colo. Agr. Expt. Station, Bull. No. 44, 1898; Ibid. No. 56, 1900; Auk, 1909, pp. 400-402.

tion down to 1909. In the 12 years between the appearance of the original bulletin and the third supplement on the birds of Colorado, the number of species credited to the State was increased from 363 to 397 and the number of those breeding from 236 to 248. Early in 1912 appeared W. L. Sclater's 'History of the Birds of Colorado,' in which the total number of species was given as 392 (including 13 not given by Cooke) and the number of those breeding reduced to 225. Cooke promptly published a paper on 'The Present Status of the Colorado Check List of Birds,'<sup>1</sup> in which he analyzed the differences in the two lists, accepted most of Sclater's eliminations from the breeding list but concluded that the total number of species should be increased to 403, to which might be added 7 more, the status of which was still in doubt. Important in this connection are his papers on 'The Winter Ranges of the Warblers'<sup>2</sup>; 'Some Winter Birds of Oklahoma'<sup>3</sup> based on his own observations in 1883-84, and 'Labrador Bird Notes'<sup>4</sup> based on the field notes of Clarence Birdseye. He has also left in manuscript a detailed list of the 'Birds of New Mexico.' The long series of migration articles in 'Bird-Lore' and in his bulletins on various groups of birds published by the Biological Survey contain a wealth of data regarding the distribution of the species mentioned. Members of the committee in charge of the preparation of the Third Edition of the 'Check-List of Birds' published by the American Ornithologists' Union in 1910, will recall that he devoted an immense amount of time and energy to the preparation of data which were incorporated in the revised statements of the distribution of the species.

In bibliography his first important work was in connection with the 'Birds of Colorado.' The original bulletin contained 182 titles and the number was increased in 1900 to 225. In the Third Supplement he stated that the additional titles for 1900-1909 numbered 118 and the 'less important titles' omitted in previous lists 91, thus making a total of 434, although he gave only 61 of the additions in full. Sclater's bibliography brought down to Decem-

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<sup>1</sup> Condor, XIV, pp. 147-153, July 1912.

<sup>2</sup> Auk, 1905, pp. 296-299.

<sup>3</sup> Ibid., 1914, pp. 473-493.

<sup>4</sup> Ibid., 1916, pp. 162-167.

ber, 1910, included 294 titles, the difference of 140 being accounted for mainly by the omission of minor references. These apparent discrepancies are significant in illustrating his method of work. With Cooke a record was a record and a title a title, however unimportant, and in consequence his lists seem longer than those of others covering the same field. In the preparation of the 'Ten Year Index to the Auk,' 1915, the basis of the work was a series of cards which he had made in connection with the indexes of the Biological Survey, and as secretary of the committee he performed the greater part of the labor in preparing them for publication. An immense amount of bibliographical material was collected in the course of his work on bird migration, but unfortunately the bibliography of migration to which he had devoted much time and labor was never brought to completion.

Of his publications on migration it is difficult to speak adequately in a few lines. Prof. Alfred Newton says: "A very praiseworthy work was performed by Prof. W. W. Cooke, whose 'Report on Bird Migration in the Mississippi Valley' in 1884 and 1885 . . . was edited by Dr. C. Hart Merriam. Some of the facts herein adduced are highly suggestive, but it must be remarked that on several points there is a difference of opinion between the author and the editor."<sup>1</sup> Fortunately the editor's opinions are carefully separated from those of the author and the reader can thus compare both statements and reach his own conclusions. Doctor Merriam himself says in the preface: "I feel no hesitancy in expressing the belief that the present report is the most valuable contribution ever made to the subject of bird migration." The later contributions on migration are published in two general series of papers in 'Bird-Lore' and in the bulletins of the Biological Survey. The 'Bird-Lore' articles extend over a period of twelve and a half years from December, 1903 to April, 1916, and contain tabular summaries of records of most of the migratory land birds, including the warblers, thrushes, flycatchers, vireos, sparrows and kinglets. The Survey bulletins on distribution and migration include one report on the warblers (1904) and five on water birds and waders: ducks, geese and swans (1906); shorebirds (1910); herons (1913);

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<sup>1</sup> Dictionary of Birds, Migration, p. 562, 1896.

rails (1914); and gulls (1915). A report on the terns was finished but not published and one on the auks and grebes was almost completed. Thus Cooke has published on most of the migratory birds of North America except the albatrosses, petrels, pelicans, cormorants, pigeons, hawks, cuckoos, goatsuckers, swifts, and hummingbirds. Important also are his two articles on migratory birds in the 'National Geographic Magazine' in 1911 and 1913, and his two papers on 'Bird Migration in the District of Columbia.'<sup>1</sup> In the latter he has worked out with great precision from a long series of observations the average dates of arrival and departure of the various migrants.

During the progress of his investigations he published from time to time a few general papers on the broader questions of migration and on his methods of work. In an article on 'The Effect of Altitude on Bird Migration'<sup>2</sup> he compared the records from Asheville and Raleigh, N. C., and showed the marked differences in avifauna and time of arrival caused by a difference of 1700 feet in the elevation of these two places in the same State. In 'Routes of Bird Migration'<sup>3</sup> he advanced his theory of 'parallels of migration'; in a paper entitled 'Many Eyes are Better Than One Pair.'<sup>4</sup> he emphasized the importance of coöperative work, as shown by observations in the vicinity of the National Capital; and in a note on 'Averaging Migration Dates,'<sup>5</sup> he explained his apparently arbitrary method of selecting dates. Some years ago he published 'Some New Facts about the Migration of Birds'<sup>6</sup> accompanied by maps showing the wonderful migration route of the golden plover, and the variation in the speed of the robin during migration. Twelve years later he revised and expanded this paper in his bulletin on 'Bird Migration,'<sup>7</sup> which contains his latest views on the subject. In this connection it is interesting to note that while he declined to accept Palmén's 9 'Zugstrassen' (migration routes) for Europe and Asia, he himself outlined no less than 7 'principal migration routes'

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<sup>1</sup> Proc. Biol. Soc. Wash., XXI, pp. 107-118, 1908. Ibid., XXVI, pp. 21-25, 1913.

<sup>2</sup> Auk, 1904, pp. 338-341.

<sup>3</sup> Auk, 1905, pp. 1-11.

<sup>4</sup> Auk, 1907, pp. 346-348.

<sup>5</sup> Auk, 1908, pp. 485-486.

<sup>6</sup> Yearbook U. S. Dept. Agr. 1903, pp. 371-386.

<sup>7</sup> U. S. Dept. Agri. Bull. No. 185, pp. 1-47, 1915.

for North America (p. 8). While he rejected Middendorff's term '*isepipteses*' proposed in 1855 to denote lines of equal flight or simultaneous arrival, he adopted precisely the same thing in his maps prepared for the use of the Committee on Regulations on Migratory Birds in 1913, and published them as '*isochronal lines*' in 1915.<sup>1</sup> Although he paid scant attention to the work of banding birds, only a few weeks before his death he had occasion to alter materially his views regarding the routes of certain species of ducks on account of data derived from this source. But it is greatly to his credit that he was ever ready to modify his opinions in the light of new data or reject an old hypothesis which was made untenable by new and more complete records.

Cooke's principal contributions to ornithology were undoubtedly his great work in collecting, arranging and preparing for use the immense mass of records concerning the migration and distribution of North American birds, in giving instruction on these subjects through publications, lectures, and personal advice, and in stimulating interest and coöperation in bird study and especially in bird migration — in short in the application of existing information to the actual solution of certain ornithological problems.

Suddenly at the opening of the spring of 1916 he was called upon to lay aside his work. He had recently passed his 58th birthday and apparently had several years of active and useful work ahead. But just at the height of his activity and usefulness when he was hoping to see the early completion of several projects in which he was interested, his hand was stayed and the pen which had long been overworked was laid aside forever. Rarely in the annals of ornithology has the advent of what has been called the greatest adventure in life come under more appropriate circumstances. On Monday, March 20, it was my privilege to accompany Professor Cooke and his daughter on what proved to be his last outing. Swans had been reported on the Potomac just below Alexandria near Jones Point where about a dozen of the stately birds were found feeding and swimming about some distance from the shore. Professor Cooke was greatly interested in them and remarked that it was many years since he had seen his last live wild swan in the

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<sup>1</sup> Bull. 185, pp. 36, 38, 42.

upper Mississippi Valley. He also examined with much interest the historic stone marking the southern corner of the District of Columbia which he had never happened to see before. The next afternoon he attended a concert, and Wednesday morning while at a conference in the Biological Survey he complained of feeling ill, and excusing himself went home. So quietly did he leave that few of his fellow workers in the office realized that he had gone. The following Monday he was removed to George Washington Hospital and on Thursday morning March 30, 1916, at 1 A. M. he died of pneumonia after an illness of only eight days. Funeral services were held on Sunday at the First Congregational Church and were attended by several hundred friends and acquaintances. The exercises at Glenwood Cemetery where the casket was placed temporarily in a receiving vault were attended only by representatives of the American Ornithologists' Union, the Audubon Society, the Biological Survey, and a few friends. It was a cold gray afternoon, and as the little circle gathered about the casket and the reading of the committal service was begun, a bluebird uttered its plaintive note, a flicker called from a neighboring tree, and a mockingbird joined in and sang throughout the reading. What more appropriate rites for a true lover of birds! A few days later he was cremated and his ashes transferred to Ripon, Wis., for burial beside the remains of his wife who had died ten years earlier. Here amid the scenes of his childhood and early manhood where he first began to study birds, another ornithological shrine is now located at the last resting place of Wells W. Cooke, "Father of coöperative study of bird migration in America."